Cost Overruns On Infrastructure Projects Patterns Causes

This paper examines three independent explanatory variables and their relation with cost overrun in order to decide whether this is different for Dutch infrastructure projects compared to worldwide findings. The three independent variables are project type (road, rail, and fixed link projects), project size (measured in terms of estimated costs) and the length of the project implementation phase. For Dutch projects,

average cost overrun is 10.6% for rail, 18.6% for roads and 21.7% for fixed links. For project size, small Dutch projects have the largest average percentage cost overruns but in terms of total overrun, large projects have a larger share. The length of the implementation phase and especially the length of the pre-construction phase are important determinants of cost overruns in the Netherlands. With each additional year of pre-construction, percentage cost overrun increases by five percentage points. In contrast, the length of the construction phase has hardly any influence on cost

overruns. This is an important contribution to current knowledge about cost overruns, because the period in which projects are most prone to cost overruns is narrowed down considerably, at least in the Netherlands. This means that period can be focused on to determine the causes and cures of overruns. Providing crucial background information for those who want to understand decision-making processes on large transport infrastructure projects, this fascinating Handbook will prove an important source of information for academics, researchers and stude

Boston's Central Artery/Tunnel Project, a 7.8

mile system of bridges and underground highways and ramps, is the most expensive public works project ever undertaken in the United States. The original cost estimate of $2.6 billion has already been exceeded by $12 billion, and the project will not be completed until 2005, seven years late. The Massachusetts Turnpike Authority (MTA), the public steward of the project, requested that the National Research Council carry out an independent assessment of the project's management and contract administration practices, with a focus on the present situation and measures that should be taken

to bring the project to a successful conclusion. This report presents the committee's findings and recommendations pertaining to cost, scheduling, and transitioning from the current organization dominated by consultants to an operations organization composed largely of full-time MTA staff. The report recommends that MTA establish an external, independent, peer-review program to address technical and management issues until the transition to operations and maintenance is complete; begin a media campaign now to teach drivers how to use the new system safely; and develop,

immediately implement, and maintain a comprehensive security program.
Cost overruns commonly occur in infrastructure projects, and when the owner is a government entity, these overruns may disrupt the funding available for other projects. Research on large projects indicates that actual project costs are on average 20% higher than estimates for road projects and 34% higher than estimates for tunnel and bridge projects. Other studies that reiterate the presence of cost overruns report values between 3.9 and 10 percent. Risk management can be used to identify and

assess risks that may cause overruns and develop risk response plans to address them. The objective of this research is to use risk management knowledge to identify and assess project risks and their expected impacts on highway infrastructure projects in Ontario. The studied Ministry of Transportation of Ontario (MTO) projects have an average cost overrun of 5.2% of tender value for new construction projects, and 11.5% for rehabilitation projects. The risk identification and analysis is followed by a comparison between MTO's risk management experience and other typical North American

organizations that are involved in transportation infrastructure such as Infrastructure Ontario and the California Department of Transportation, as well as other contract delivery methods such as design-build and public- private partnerships. From analyzing 986 risk events, this research identifies design scope changes, material, and latent conditions as the main risks that appear to influence cost overruns for rehabilitation projects. For new construction, the main risks are design scope changes, latent conditions, and permits and regulations. Once the risks are identified

and analyzed, action is required to manage the risks that are considered most important. This thesis touches lightly on possible risk management actions for the identified risks.

Financial Project Management

Explanations and Their Theoretical Embeddedness

Effects of Infrastructure Project Cost Overruns and Schedule Delays in Sub-Saharan Africa

Decision-making on Mega-projects

Project Cost Overrun

What Causes Cost Overrun in Transport Infrastructure Projects?

Modeling Cost and Time Uncertainty in Rail Line Construction

The infrastructure industry has witnessed incredible growth around the world in the past decade. Large-scale investments have been made by governments in the infrastructure industry as an effective way to stimulate the economy. However, it is worth noting that infrastructure projects worldwide suffer from frequent cases of cost overrun. As a critical challenge in the infrastructure industry, cost overrun remains, however an under-researched academic topic. Previous studies in this field have mainly adopted quantitative methodological research methods and analyzed data from economic infrastructure projects. Social infrastructure projects, however, have received comparatively less

academic attention. This study seeks to fill this gap and to analyze the reasons why social infrastructure projects experience cost overrun. Data were collected from four cases of social infrastructure projects in China, and a multiple case-study approach was taken to analyze the data. The findings of the research suggest that, first, the time pressure and changes of orders/scope are the main factors causing the cost overrun in the context of Chinese social infrastructure projects. Moreover, combining the practical cases with existing theorists, it is clear that the evolutional theorist performs better in explaining the cost overrun in the context of Chinese social infrastructure projects comparing to the psycho theorist.

Policy makers often call for increased spending on

infrastructure, which can encompass a broad range of investments, from roads and bridges to digital networks that will expand access to high-speed broadband. Some point to the near-term macroeconomic benefits, such as job creation, associated with infrastructure spending; others point to the long-term effects of such spending on productivity and economic growth. Economic Analysis and Infrastructure Investment explores the links between infrastructure investment and economic outcomes, analyzing key economic issues in the funding and management of infrastructure projects. It includes new research on the short-run stimulus effects of infrastructure spending, develops new estimates of the stock of US infrastructure capital, and explores incentive aspects of public-private partnerships with particular attention

to their allocation of risk. The volume provides a reference for researchers seeking to study infrastructure issues and for policymakers tasked with determining the appropriate level and allocation of infrastructure spending.

In the U.S., four in ten public infrastructure projects report delays or cost overruns. To tackle this problem, regulators often scrutinize the project contractor's operations. We investigate the causal effect of government oversight on project efficiency by gleaning 262,857 projects that span seventy-one U.S. federal agencies and 54,739 contractors. Our identification strategy exploits a regulatory bylaw: if a project's anticipated budget exceeds a threshold value, the contractor's operations are subject to surveillance from independent procurement officers; otherwise, these

operational checks are waived. Using a regression discontinuity design, we find that oversight is obstructive to the project's operations, especially when the contractor (i) has no prior experience in public projects, (ii) is paid with a fixed-price contract that includes performance-based incentives, and (iii) performs a labor-intensive task. In contrast, oversight is least obstructive -- or beneficial -- when the contractor (i) is experienced, (ii) is paid with a time-and-materials contract, and (iii) performs a machine-intensive task.

What are the reasons for cost overruns? Do reforms reduce the magnitudes of cost overruns in projects? Has the impact of cost overruns been analyzed? What causes cost overrun in transport infrastructure projects? What is the total value of project cost overruns? This powerful Cost overrun self-

assessment will make you the reliable Cost overrun domain visionary by revealing just what you need to know to be fluent and ready for any Cost overrun challenge. How do I reduce the effort in the Cost overrun work to be done to get problems solved? How can I ensure that plans of action include every Cost overrun task and that every Cost overrun outcome is in place? How will I save time investigating strategic and tactical options and ensuring Cost overrun costs are low? How can I deliver tailored Cost overrun advice instantly with structured going-forward plans? There's no better guide through these mind-expanding questions than acclaimed best-selling author Gerard Blokdyk. Blokdyk ensures all Cost overrun essentials are covered, from every angle: the Cost overrun self-assessment shows succinctly and clearly that what needs to

be clarified to organize the required activities and processes so that Cost overrun outcomes are achieved. Contains extensive criteria grounded in past and current successful projects and activities by experienced Cost overrun practitioners. Their mastery, combined with the easy elegance of the self-assessment, provides its superior value to you in knowing how to ensure the outcome of any efforts in Cost overrun are maximized with professional results. Your purchase includes access details to the Cost overrun self-assessment dashboard download which gives you your dynamically prioritized projects-ready tool and shows you exactly what to do next. Your exclusive instant access details can be found in your book. You will receive the following contents with New and Updated specific criteria: - The latest

quick edition of the book in PDF - The latest complete edition of the book in PDF, which criteria correspond to the criteria in... - The Self-Assessment Excel Dashboard - Example pre-filled Self-Assessment Excel Dashboard to get familiar with results generation - In-depth and specific Cost overrun Checklists - Project management checklists and templates to assist with implementation INCLUDES LIFETIME SELF ASSESSMENT UPDATES Every self assessment comes with Lifetime Updates and Lifetime Free Updated Books. Lifetime Updates is an industry-first feature which allows you to receive verified self assessment updates, ensuring you always have the most accurate information at your fingertips. Identification and Modeling of Construction Cost Overruns Parameters for Public Infrastructure Projects Using

Multivariate Statistical Methods
Fundamental Concepts for Owners, Engineers, Architects, and Builders

Proceedings of the 21st International Symposium on Advancement of Construction Management and Real Estate
An Anatomy of Ambition
Understanding Legal and Contract Requirements
Megaprojects and Risk

Infrastructure only tends to be noticed when it is absent, declining, or decrepit, or when enormous cost overruns, time delays, or citizen

protests make the headlines. If infrastructure is indeed a fundamental driver of economic growth and social development, why is it so difficult to get right? In addressing this perennial question, this volume–the fourth edition in an annual series tackling different aspects of governance around the world–makes the case for a governance perspective on infrastructure. This implies moving beyond rational economic analysis of

what should be done towards an analysis of the political, institutional, and societal mechanisms that shape decision-making about infrastructure investment, planning, and implementation. Engaging with theories from sociology, political science, and public administration, and drawing on empirical analyses bridging OECD and non-OECD countries, the contributions to this volume dissect the logics of infrastructure governance in a novel way, providing timely

analyses that will enrich both scholarly and policy debates about how to get infrastructure governance right. Megaprojects and Risk provides the first detailed examination of the phenomenon of megaprojects. It is a fascinating account of how the promoters of multi-billion dollar megaprojects systematically and self-servingly misinform parliaments, the public and the media in order to get projects approved and built. It shows,

in unusual depth, how the formula for approval is an unhealthy cocktail of underestimated costs, overestimated revenues, undervalued environmental impacts and overvalued economic development effects. This results in projects that are extremely risky, but where the risk is concealed from MPs, taxpayers and investors. The authors not only explore the problems but also suggest practical solutions drawing on theory, experience and hard, scientific

evidence from the several hundred projects in twenty nations and five continents that illustrate the book. Accessibly written, it will be the standard reference for students, scholars, planners, economists, auditors, politicians and interested citizens for many years to come.
This book offers a new way of thinking about the causes and consequences of cost overrun to firms and society. It is ideal for academic researchers in

project management, management accounting and corporate finance, as well as for managers in the private and public sectors.

Managing large-scale transportation infrastructure projects is difficult due to frequent misinformation about the costs which results in large cost overruns that often threaten the overall project viability. This paper investigates the explanations for cost overruns that are given in the

literature. Overall, four categories of explanations can be distinguished: technical, economic, psychological, and political. Political explanations have been seen to be the most dominant explanations for cost overruns. Agency theory is considered the most interesting for political explanations and an eclectic theory is also considered possible. Non-political explanations are diverse in character, therefore a range of different theories

(including rational choice theory and prospect theory), depending on the kind of explanation is considered more appropriate than one all-embracing theory.

Cost Overrun A Complete Guide - 2019 Edition

An Analysis of Cost Overruns and Time Delays of INDOT Projects

Critical risks in large construction projects and their consideration in cost estimation

Cost Overruns in Large-scale Transport Infrastructure Projects
A Theoretical and Empirical Exploration for the Netherlands and Worldwide
Between Ambition and Realities
Explaining Cost Overruns of Large-Scale Transportation Infrastructure Projects Using a Signalling Game

Civil engineers are often in the firing line for alleged cost overruns, particularly on major publicly funded infrastructure projects. This usually occurs when the final cost of a project is

simply compared with the original estimate, even though this was published a long time ago, in different circumstances and for a quite different project to the one carried out. This paper proposes a systematic approach to ensure that cost overruns, should they occur, are more accurately defined in terms of when the initial and end costs are assessed, from which point of view, at which project stage, and including scope changes and financial assumptions. The paper refers to the UK's £163 billion nuclear decommissioning programme.

This book presents the proceedings of CRIOCM_2016, 21st International Conference on

Advancement of Construction Management and Real Estate, sharing the latest developments in real estate and construction management around the globe. The conference was organized by the Chinese Research Institute of Construction Management (CRIOCM) working in close collaboration with the University of Hong Kong. Written by international academics and professionals, the proceedings discuss the latest achievements, research findings and advances in frontier disciplines in the field of construction management and real estate. Covering a wide range of topics, including building information modelling,

big data, geographic information systems, housing policies, management of infrastructure projects, occupational health and safety, real estate finance and economics, urban planning, and sustainability, the discussions provide valuable insights into the implementation of advanced construction project management and the real estate market in China and abroad. The book is an outstanding reference resource for academics and professionals alike. These conference proceedings cover an outstanding view for academics and professionals to share research findings on the latest developments in real estate and construction

management. The Chinese Research Institute of Construction Management (CRIOCM) in collaboration with Chongqing University organized CRIOCM2014, the 19th International Symposium on "Advancement of Construction Management and Real Estate." The proceedings collect 105 selected papers addressing the following key themes: Sustainable Urbanization, Sustainable Construction, Urban Construction and Management, Affordable Housing, Urban Land Development and Utilization, Management for Large Infrastructure Projects, Green Construction Materials and Construction Waste Management, Development and Management

for Mountainous Towns, Advancement of Construction Project Management, Redevelopment in Disaster Areas, Law and Policies for Construction and Real Estate, Information Technology for Construction Management and Real Estate and lastly Other Topics.

It will be useful for those experienced and senior professionals who are charged with authorizing and controlling projects. Recommended. P.F. Rad, Choice Building on the seminal work of Bent Flyvbjerg, this book is a collection of expert contributions that will prove essential to anyone wanting to understand why mega-projects go

wrong and how they can be made to work better. Professor Sir Peter Hall, University College London, UK This book offers a refreshing and fascinating look at mega-projects from the perspective of public evaluation and planning. With the changing role of the public sector in planning and implementing large-scale projects and a subsequent strong emergence of private public modes of operation, mega-projects have become a problematic phenomenon. This volume is a major source of information and reference. It provides the reader with unique insights and caveats in mega-projects planning. Peter Nijkamp, VU

University Amsterdam, The Netherlands This book enlarges the understanding of decision-making on mega-projects and suggest recommendations for a more effective, efficient and democratic approach. Authors from different scientific disciplines address various aspects of the decision-making process, such as management characteristics and cost benefit analysis, planning and innovation and competition and institutions. The subject matter is highly diverse, but certain questions remain at the forefront. For example, how do we deal with protracted preparation processes, how do we tackle risks and uncertainties, and how can we best

divide the risks and responsibilities among the private and public players throughout the different phases of the project? Presenting a state-of-the-art overview, based on experiences and visions of authors from Europe and North America, this unique book will be of interest to practitioners of large-scale project management, politicians, public officials and private organisations involved in mega-project decision-making. It will also appeal to researchers, consultants and students dealing with substantial engineering projects, complex systems, project management and transport infrastructure.
Large Infrastructure Projects in Germany

Geographical Variation in Project Cost Performance
Understanding Infrastructure Project Costs: The Effects of Project Implementation Length and Public-Private Partnerships on Surface Transportation Project Overrun Costs
Finance, Stakeholder Alignment, Governance
Cost Overruns in Large-Scale Transportation Infrastructure Projects
The Governance of Infrastructure
Public – Private Partnerships for Infrastructure Development

Strategic behaviour is one of the main

explanations for cost overruns. It can theoretically be supported by agency theory, in which strategic behaviour is the result of asymmetric information between the principal and agent. This paper gives a formal account of this relation by a signalling game. This is a game with incomplete information which considers the way in which parties anticipate upon other parties' behaviour in choosing a course of action. The game shows how cost overruns are the result of an inappropriate signal. This makes it impossible for the principal to distinguish

between the types of agents, and hence, allows for strategic behaviour. It is illustrated how cost overruns can be avoided by means of two policy measures, e.g. an accountability structure and benchmarking.

In recent years the construction industry has been criticised forlack of successful innovation compared to other major industries.The question of why the industry has not been seen to be innovativehas created concern among many involved with construction andproperty. The driving concern is where the motivation for

thisinnovation should come from. Although construction clients havemade an impact in this area, the industry itself seems divided asto whether, when and where clients should drive the innovationprocess. Clients Driving Innovation brings together an international groupof researchers and practitioners to investigate the role of clientsin construction innovation. Written in three parts, it covers thecontext for innovation driven by clients, the client impact on theinnovation process and how new ideas can be pushed through intopractice.

Numerous case studies illustrate the role clients canplay and the key issues that need to be addressed. With increasing interest in the contribution clients can make toconstruction innovation, Clients Driving Innovation will beessential reading for construction management researchers, majorconstruction contractors and clients and government policy makers.

Cost overruns in transport infrastructure projects know no geographical limits; overruns are a global phenomenon. Nevertheless, the size

of cost overruns varies with location. In the Netherlands, cost overruns appear to be smaller compared to the rest of the world. This paper tests whether Dutch projects perform significantly better in terms of cost overruns than other geographical areas. It is concluded that for road and tunnel projects, the Netherlands performs similarly to the rest of the world. For rail projects, Dutch projects perform considerably better, with projects having significantly lower percentage cost overruns in real terms (11%) compared to projects in other

North West European countries (27%) and in other geographical areas (44%). Bridge projects also have considerably smaller cost overruns - 7% in the Netherlands compared with 45% in other NW European countries and 27% in other geographical areas. In explaining cost overruns, geography should therefore clearly be taken into consideration.

This book gathers peer-reviewed contributions presented at the 3rd International Conference on Innovative Technologies for Clean and Sustainable Development, held in Chandigarh,

India, on February 19-21, 2020. The respective papers focus on sustainable materials science and cover topics including the durability and sustainability of concrete, green materials in construction, economics of cleaner production, environmental impact mitigation, innovative materials for sustainable construction, performance and sustainability of special concrete, renewable energy infrastructure, sustainability in road construction, sustainable concrete, sustainable construction materials, waste minimization & management, prevention

and management of water pollution, and zero-energy buildings.
Survival of the Un-fittest
International Handbook on Mega-Projects
Managing the Final Stages of Boston's Central Artery/Tunnel Project
Powering Science
Cost Overruns in Transport Infrastructure
ITCSD 2020
Cost Overruns on Infrastructure Projects
NASA's Science Mission Directorate (SMD) currently operates over five dozen

missions, with approximately two dozen additional missions in development. These missions span the scientific fields associated with SMD's four divisionsâ€"Astrophysics, Earth Science, Heliophysics, and Planetary Sciences. Because a single mission can consist of multiple spacecraft, NASA-SMD is responsible for nearly 100 operational spacecraft. The most high profile of these are the large strategic missions, often referred to as "flagships." Large

strategic missions are essential to maintaining the global leadership of the United States in space exploration and in science because only the United States has the budget, technology, and trained personnel in multiple scientific fields to conduct missions that attract a range of international partners. This report examines the role of large, strategic missions within a balanced program across NASA-SMD space and Earth sciences programs. It considers the role

and scientific productivity of such missions in advancing science, technology and the long-term health of the field, and provides guidance that NASA can use to help set the priority of larger missions within a properly balanced program containing a range of mission classes.

The causes of cost overruns in transportation infrastructure projects has been a topic that has puzzled academics for some time. The state of

America's infrastructure has also sparked conversations among political leaders regarding how America can invest in our infrastructure at lower costs than it has in the past. While studies exist that have provided the essential building blocks and frameworks for understanding cost overruns, the majority of studies have an international focus. In this study I aspire to provide greater insight into the potential causes of overrun costs in transportation

projects in the United States. Empirical Model: This study uses two linear probability models and two logit models to estimate the relationships between the dependent variable, overrun cost, and two independent variables, implementation length and whether a project is part of a public-private partnership agreement. Models include variables that control for project characteristics and state economic factors. Data: This study draws on data

collected by the Federal Highway Administration and state Department of Transportations. From these sources I created a dataset of 48 completed transportation projects. Results: My LPM model suggests every year of project construction increases project overrun costs by more than 7.3 percentage points. My logit model regression results demonstrate that every additional year it takes to implement a transportation project, the likelihood of overrun costs

increase by 1.16 times and every additional year of construction length increase the likelihood of overrun costs by 1.45 times. Policy Recommendations: My results suggest the following policy recommendations: (1) reduce implementation length; (2) incentivize P3s; and (3) penalize inaccurate cost estimations.

Transportation construction projects are often plagued by cost overruns and delays. Technical, economic-political,

psychological, and legal causes explain the frequent underestimations. To counteract such underestimations, the author developed an innovative approach to capture cost and time uncertainty in rail line projects, and applied this to the construction of a new high speed rail line in Portugal. The construction of the four main types of structures in rail lines (tunnels, viaducts, cuts and embankments) is modeled bottom-up from the single activity to the

entire rail line. Sub-networks of activities are combined in structure networks to model the rail line structures; in turn, the structure networks are organized in the construction network to represent the rail line. For the first time, three sources of uncertainty (variability in the construction process, correlations between the costs of repeated activities, and disruptive events) are modeled jointly at the level of the single activity.

These uncertainties are propagated to the total construction cost and time through the combination of the individual activity costs and times. The Construction and Uncertainty Models are integrated in the Decision Aids for Tunneling (DAT), which have been extended beyond tunneling to consider different structures and different uncertainty types. Based on historical input data and expert estimations, the cost and time uncertainty in the

construction of four alignments of the new Portuguese high speed rail line is simulated. The three sources of uncertainty cause different cost and time impacts depending on the type of structure suggesting structure specific mitigation measures. Most importantly, their cumulative impact causes significant increases in construction cost and time compared to the deterministic estimates: 58% in the construction cost of tunnels, and 94% in the construction

time of cuts and embankments. The Construction and Uncertainty Models and their integrated implementation in the DAT provide transportation agencies with a modeling tool to tackle cost and time uncertainty in the construction of rail lines and other linear/networked infrastructure projects.

Seminar paper from the year 2022 in the subject Business economics - Investment and Finance, grade: 1,5, University of Western Sydney, course: Financial

Management of Projects, language: English, abstract: Early cost estimating has often become a major challenge in large projects. Budget overruns occur time and again, which leads regularly to conflicts between investors, project teams, contractors, and other stakeholders. The cause for these are several factors such as inadequate consideration of project risks, insufficient project information and an unclear project scope, or unforeseen

project complexities. The following literature review, therefore, observes the risk identification of major construction and infrastructure projects as one of the major reasons for cost overruns. This review aims to deliver an overview of the different approaches to the identification of risks during the early stage of large projects. In this context, however, no rigid definition of the term "major project" has yet emerged. There is no fixed rule when a

project is a major project and should be organized likewise. A major project is characterized by the fact that it differs from the client's usual projects in terms of its planning and implementation duration, its complexity, the large number of participants, or its high social significance. In contrast to small and medium-sized construction projects, where routine can be applied, extensive infrastructure and construction projects are often a multitude of different tasks

with several interconnections and interfaces. They often require more complicated organizational structures, and accordingly many risk management requirements. Whether a project is considered a major project depends on the specific individual case. In these projects, decision-makers often rely on intuition, judgment, and their personal experiences to conduct risk assessments and cost estimates. Although various risk assessment models have been

developed in recent years, the lack of precise and general data to examine risk effects usually leads to inconsistencies and inaccuracies in risk assessment. This often results in significant budget overruns for large construction and infrastructure projects.

Decision-Making, Overruns, and Their Consequences

Problems, Causes, Cures

NASA's Large Strategic Science Missions

Large-Scale Construction Project

Management
Economic Analysis and Infrastructure Investment
Concepts, Strategies, and Practices for Success
Why the Worst Infrastructure Gets Built - and What We Can Do about It

This book presents an analysis of why some large infrastructure projects are delayed or compromised and offers important insights into the better delivery of future projects. It provides an important reaction to the ambitious €315 billion investment plan devised by the European Commission, wherein Europe's infrastructure is a key

investment target. Germany is adopted as a focus, as Europe's largest economy, and a nation that has seen significant delays and tensions in the delivery of key infrastructure projects. The contributions to this volume demonstrate various patterns for infrastructure assets and illustrate how factors such as poor project governance, early planning mistakes, inappropriate risk management and unforeseen technological challenges influence delivery. The in-depth case studies on the Berlin Brandenburg Airport, the Hamburg Elbphilharmonie, and offshore wind parks show how project delivery can face massive problems, and illuminating solutions are offered to these problems. Overall, the case of Germany also offers the opportunity to assess various new forms of project delivery,

such as public-private partnerships (PPP), and the risks and opportunities of ambitious first-mover 'pioneer' projects. The book will be of great interest for scholars and upper-level students of human geography, business and management, as well as policy makers.

Infrastructure cost overruns receive a significant amount of attention in the academic literature as well as the popular press. The methodological weaknesses in the dominant approaches adopted to explain cost overrun causation on infrastructure projects are explored in this article. A considerable amount of cost overrun research is superficial, replicative, and thus has stagnated the development of a robust theory to mitigate and contain the problem. Future research should move from single-cause

identification and the traditional net-effect correlational analysis to a search for causal recipes through systems thinking and retrospective sensemaking to address the high-level interactions between multiple factors.

A majority of large-scale construction and major infrastructure projects are funded by public funds from taxpayers. However, these projects are often subject to severe delays and cost overruns. Large-Scale Construction Project Management: Understanding Legal and Contract Requirements introduces integrated approaches to project management and control mechanisms to effectively manage large-scale construction projects. It explains the contractual requirements and associated legal principles under the latest edition of the leading standard forms of

contracts, including FIDIC 2017, NEC4, and JCT 2016. It explains integrated project governance regarding time, cost, risk, change, contract management, and more. Further, it discusses the legal issues of scheduling delays and disruptions regarding the Delay and Disruption Protocol (Society of Construction Law) as well as Forensic Schedule Analysis guidance (American Association of Cost Engineering). Features: Provides strategies to effectively resolve disputes during construction projects Examines Quantitative Schedule Risk Analysis (QSRA) and Quantitative Cost Risk Analysis (QCRA) Introduces the most recent software and techniques used in managing large-scale construction projects This book serves as a useful resource for project control and management

professionals, researchers in construction management and project management, and students in building construction management and project management.
Cost Overruns on Infrastructure ProjectsPatterns, Causes, and CuresAnalysis of Risks and Cost Overruns in Design-bid-build Highway Infrastructure Projects in Ontario
Patterns, Causes, and Cures
Industrial Megaprojects
Proceedings of the 19th International Symposium on Advancement of Construction Management and Real Estate
Why Social Infrastructure Projects Experience Cost Overrun
Different Cost Performance
Cost-benefit Analysis, Planning and Innovation

Analysis of Risks and Cost Overruns in Design-bid-build Highway Infrastructure Projects in Ontario

Large infrastructure projects often face significant cost overruns and stakeholder fragmentation. Public-Private Partnerships (PPPs) allow governments to procure long-term infrastructure services from private providers, rather than developing, financing, and managing infrastructure assets themselves. Aligning public and private interests and institutional logics for decades-long service contracts subject to shifting economic and political contexts creates significant governance challenges. We

integrate multiple theoretical perspectives with empirical evidence to examine how experiences from more mature PPP jurisdictions can help improve PPP governance approaches worldwide.

The article first describes characteristics of major infrastructure projects. Second, it documents a much neglected topic in economics: that ex ante estimates of costs and benefits are often very different from actual ex post costs and benefits. For large infrastructure projects the consequences are cost overruns, benefit shortfalls, and the systematic underestimation of risks. Third,

implications for cost-benefit analysis are described, including that such analysis is not to be trusted for major infrastructure projects. Fourth, the article uncovers the causes of this state of affairs in terms of perverse incentives that encourage promoters to underestimate costs and overestimate benefits in the business cases for their projects. But the projects that are made to look best on paper are the projects that amass the highest cost overruns and benefit shortfalls in reality. The article depicts this situation as 'survival of the unfittest'. Fifth, the article sets out to

explain how the problem may be solved, with a view to arriving at more efficient and more democratic projects, and avoiding the scandals that often accompany major infrastructure investments. Finally, the article identifies current trends in major infrastructure development. It is argued that a rapid increase in stimulus spending, combined with more investments in emerging economies, combined with more spending on information technology is catapulting infrastructure investment from the frying pan into the fire.Listed as "Most Read" article on the journal's home page. Listed on SSRN's

Top Ten Download List for Construction. Avoid common pitfalls in large-scale projects using these smart strategies Over half of large-scale engineering and construction projects—off-shore oil platforms, chemical plants, metals processing, dams, and similar projects—have miserably poor results. These include billions of dollars in overruns, long delays in design and construction, and poor operability once finally completed. Industrial Megaprojects gives you a clear, nontechnical understanding of why these major projects get into trouble, and how your company can prevent hazardous and costly

errors when undertaking such large technical and management challenges. Clearly explains the underlying causes of over-budget, delayed, and unsafe megaprojects Examines effects of poor project management, destructive team behaviors, weak accountability systems, short-term focus, and lack of investment in technical expertise Author is the CEO of the leading consulting firm for evaluating billion-dollar projects Companies worldwide are rethinking their large-scale projects. Industrial Megaprojects is your essential guide for this rethink, offering the tools and principles that are

the true foundation of safe, cost-effective, successful megaprojects.

Since the demise of urban renewal in the early 1970s, the politics of large-scale public investment in and around major American cities has received little scholarly attention. In MEGA-PROJECTS, Alan Altshuler and David Luberoff analyze the unprecedented wave of large-scale (mega-) public investments that occurred in American cities during the 1950s and 1960s; the social upheavals they triggered, which derailed large numbers of projects during the late 1960s and early 1970s; and the political

impulses that have shaped a new generation of urban mega-projects in the decades since. They also appraise the most important consequences of policy shifts over this half-century and draw out common themes from the rich variety of programmatic and project developments that they chronicle. The authors integrate narratives of national as well as state and local policymaking, and of mobilization by (mainly local) project advocates, with a profound examination of how well leading theories of urban politics explain the observed realities. The specific cases they analyze include a wide mix of

transportation and downtown revitalization projects, drawn from numerous regions—most notably Boston, Denver, Los Angeles, New York City, Chicago, Atlanta, Dallas, Portland, and Seattle. While their original research focuses on highway, airport, and rail transit programs and projects, they draw as well on the work of others to analyze the politics of public investment in urban renewal, downtown retailing, convention centers, and professional sports facilities. In comparing their findings with leading theories of urban and American politics, Altshuler and Luberoff arrive at some surprising findings about

which perform best and also reveal some important gaps in the literature as a whole. In a concluding chapter, they examine the potential effects of new fiscal pressures, business mobilization to relax environmental constraints, and security concerns in the wake of September 11. And they make clear their own views about how best to achieve a balance between developmental, environmental, and democratic values in public investment decisionmaking. Integrating fifty years of urban development history with leading theories of urban and American politics, MEGA-PROJECTS provides significant new insights

into urban and intergovernmental politics.
Cost Overruns - Helping to Define What They Really Mean
Oversight and Efficiency in Public Projects
Different Determinants? The Case of Cost Overruns in Dutch Transport Infrastructure Projects
Completing the "Big Dig"
A Regression Discontinuity Analysis
Clients Driving Innovation
The Netherlands Versus Worldwide

This paper provides conceptual insights on the economic impact of project cost

overruns and schedule delays on infrastructure procurement in developing countries with weak institutions such as those in Sub-Saharan Africa. Project cost overruns and schedule delays are a major and widespread problem in infrastructure procurement the world over that has received a lot of attention in the recent past. However, a critical review of the literature reveals that extant studies on project overruns are heavily skewed towards causative factors, with little or no attention to the effects it has on the

economy as a whole. The paucity of studies on the effects of project cost overruns and schedule delays further reinforces the imperative to reacquaint policymakers and infrastructure developers, as well as project financiers with the gravity and import of the problem for infrastructural development in particular and the wider economy in general. The study undertakes an exploratory approach drawing from a wide range of theoretical and empirical literature obtained from policy documents, study reports and peer-reviewed articles.

The findings shows that cost overrun and schedule delay in infrastructure procurement can have a damaging economic effect ranging from productive inefficiency of scarce resources, further delays, contractual disputes, claims and litigation to project failure and total abandonment. The study recommends project management capacity-building for infrastructure developers, project managers as well as a number of innovative control mechanisms such as reference class forecasting, public-private partnership

and computer-aided cost estimating tools including artificial neural networks, data mining, building information modelling as well as fuzzy neural inference model, genetic algorithms, and stochastic simulation to curb the menace of the phenomenon.

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